

IN THE CLAIMS

1. (Currently amended) A method for an agent that modulates bone mineralization, said method comprising:

contacting an osteogenic cell expressing a NELL-1 gene with a test agent; and detecting an expression level of said NELL-1 gene in the contacted cell, where a difference in the expression level of NELL-1 in a an osteogenic cell that is not contacted indicates that said test agent is an agent that modulates bone mineralization,

wherein the osteogenic cell is selected from the group consisting of an osteoblast, a mesenchymal cell, a fibroblast cell, a dura cell, a chondrocyte, a MC3T3 cell and a chondroblast.

2. (Previously amended) The method of claim 1, further comprising recording test agents that modulate expressions of the NELL-1 nucleic acid or NELL-1 protein in a database of test agents modulating NELL-1 activity or in a database of test agents modulating bone mineralization.

Claims 3-7 (withdrawn).

8. (Original) The method of claim 1, wherein said level of NELL-1 is detected by determining the expression level of a NELL-1 protein in said biological sample.

9. (Original) The method of claim 8, wherein said detecting is via a method selected from the group consisting of capillary electrophoresis, a Western blot, mass spectroscopy, ELISA, immunochromatography, and immunohistochemistry.

10. (Original) The method of claim 1, wherein said cell is cultured ex vivo.

11. (Original) The method of claim 1, wherein said test agent is not an antibody.

12. (Original) The method of claim 1, wherein said test agent is not a protein.

Claims 13-50 (withdrawn).

51. (Currently amended) The method of claim 1, wherein the osteogenic cell is ~~selected from~~ a cell endogenous to a fetal calvarial cell culture.

52. (Currently amended) A method for an agent that modulates bone mineralization, said method comprising:

contacting an osteogenic cell endogenous to a fetal calvarial cell culture expressing a NELL-1 gene with a test agent; and detecting an expression level of said NELL-1 gene in the contacted cell, where a difference in the expression level of NELL-1 in an osteogenic cell that is not contacted indicates that said test agent is an agent that modulates bone mineralization.

~~The method of claim 51, wherein the osteogenic cell is selected from the group comprising an osteoblast, a mesenchymal cell, a fibroblast cell, a stem cell, or a bone marrow cell, a dura cell, a chondrocyte, and a chondroblast.~~

53. Canceled.

54. (New) A method for an agent that modulates bone mineralization, said method comprising:

contacting an osteogenic cell expressing a NELL-1 gene with a test agent; and detecting an expression level of said NELL-1 gene in the contacted cell, where a difference in the expression level of NELL-1 in an osteogenic cell that is not contacted indicates that said test agent is an agent that modulates bone mineralization.